REMARKS

The Applicant believes that the following comments will convince the Examiner that the objections and rejections in the August 23, 2005 Office Action should be reconsidered and withdrawn.

I. The Invention

The present invention pertains to a mass spectrometer system in which an empirical formula is identified based on measurements taken during multiple stages. Specifically, fragmentation of the sample ions is further disclosed to obtain results of empirical formulas for biological samples.

II. The Examiner's Rejections

The Examiner rejected claims 30-33 for failing to point out distinctly claimed subject matter as required by 35 U.S.C. § 112. Particularly, the Examiner points to independent claim 30, line 9, which states "an empirical formula of said sample."

Next, the Examiner rejected claims 30-33 under 35 U.S.C. § 102 (e) as being anticipated by Dasseux et al. (US 2002/0019023 A1). According to the Examiner with regard to claim 30, Dasseux discloses "a method of analyzing a drug-dosed sample that includes ionizing a drug-dosed sample with metabolic products," "introducing said ions to the analysis region of a mass spectrometer," "continuously monitoring the ion sand detecting changes to the sample," and "determining the molecular weight of each species present in a sample to determine the empirical formula and identifying each species by comparing the empirical formula to a database of formulas." Also, the Examiner rejected claim 31 citing that Dasseux "teach[es] updating databases with the changes that are

detected." Next, the Examiner rejected claim 32 and cites that Dasseux teaches, "where the mass spectrometer is a FTMS." Finally, the Examiner rejected claim 33 citing that Dasseux discloses, "using electrospray ionization as well as chemical," and "both of these methods are forms of Atmospheric Pressure Ionization."

III. The Examiner's Rejections Should Be Reconsidered and Withdrawn

A. The Examiner's Rejection under 35 U.S.C. §112

The Examiner rejected claims 30-33 as indefinite for failure to distinctly claim the subject matter that the applicant regards as his invention. Applicant has considered this rejection and respectfully disagrees. Rather, the applicant directs the Examiner's attention to the entirety of claim 30, which particularly claims determining the molecular weight of the sample in order to determine an empirical formula which allows for the identification of each species when compared with a database. The claim distinctly claims a method for determining and using an empirical formula to identify a species, i.e., by comparing it to a database of known empirical formulas. Therefore, Applicant requests that this rejection be reconsidered and withdrawn.

B. The Examiner's Rejection under 35 U.S.C. § 102(e)

The Examiner rejected claims 30-33 as being anticipated by Dasseux. Specifically, the Examiner argues that Dasseux discloses in page 12, paragraph 117, through page 13, paragraph 127 and page 10, paragraphs 90-91, "a method of analyzing a drug-dosed sample that includes ionizing a drug-dosed sample with metabolic products,"

as disclosed in claim 30 of the present application.

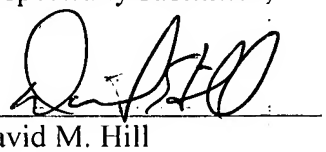
Applicant submits that Dasseux fails to teach several aspects of the presently claimed invention. Specifically, Dasseux does not teach using the molecular weight to determine the empirical formula of each species present in a said sample, nor identifying each said species. Rather, Dasseux simply teaches a method for analyzing drug-dosed biological samples using FTMS, whereby peak profiles are acquired and are used to detect phenotypic differences associated with drug-dosing. In short, Dasseux teaches a method that permits the elucidation of molecular differences between complex biological samples, but does not permit the determination of the molecular weight and empirical formula of each species present in the sample.

In addition, Dasseux teaches away from the methods claimed in the present invention. That is, Applicant directs the Examiner's attention to paragraph 0131 of Dasseux, which states that "[m]ost biological molecules corresponding to peaks observed in this type of analysis are not identifiable, at least initially, until databases of HICS-FTMS peak profiles and the identities of molecules corresponding to those individual peaks are compiled". According to Dasseux, these peaks are unidentifiable, whereas the present invention claims a method to identify these peaks. Moreover, Dasseux also fails to teach the claimed steps of determining changes, determining molecular weight of the species within the sample, determining an empirical formula, and comparing the empirical formula to a molecular database. None of the citation referenced by the Examiner teach these novel aspects of the applicant's claimed invention. In view of the foregoing, the applicant respectfully requests that this rejection be withdrawn.

Conclusion

Applicant respectfully submits that the present invention as claimed in claims 30-33 represents a patentable contribution to the art and the application is in condition for allowance. Early and favorable action is accordingly solicited.

Respectfully submitted,



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